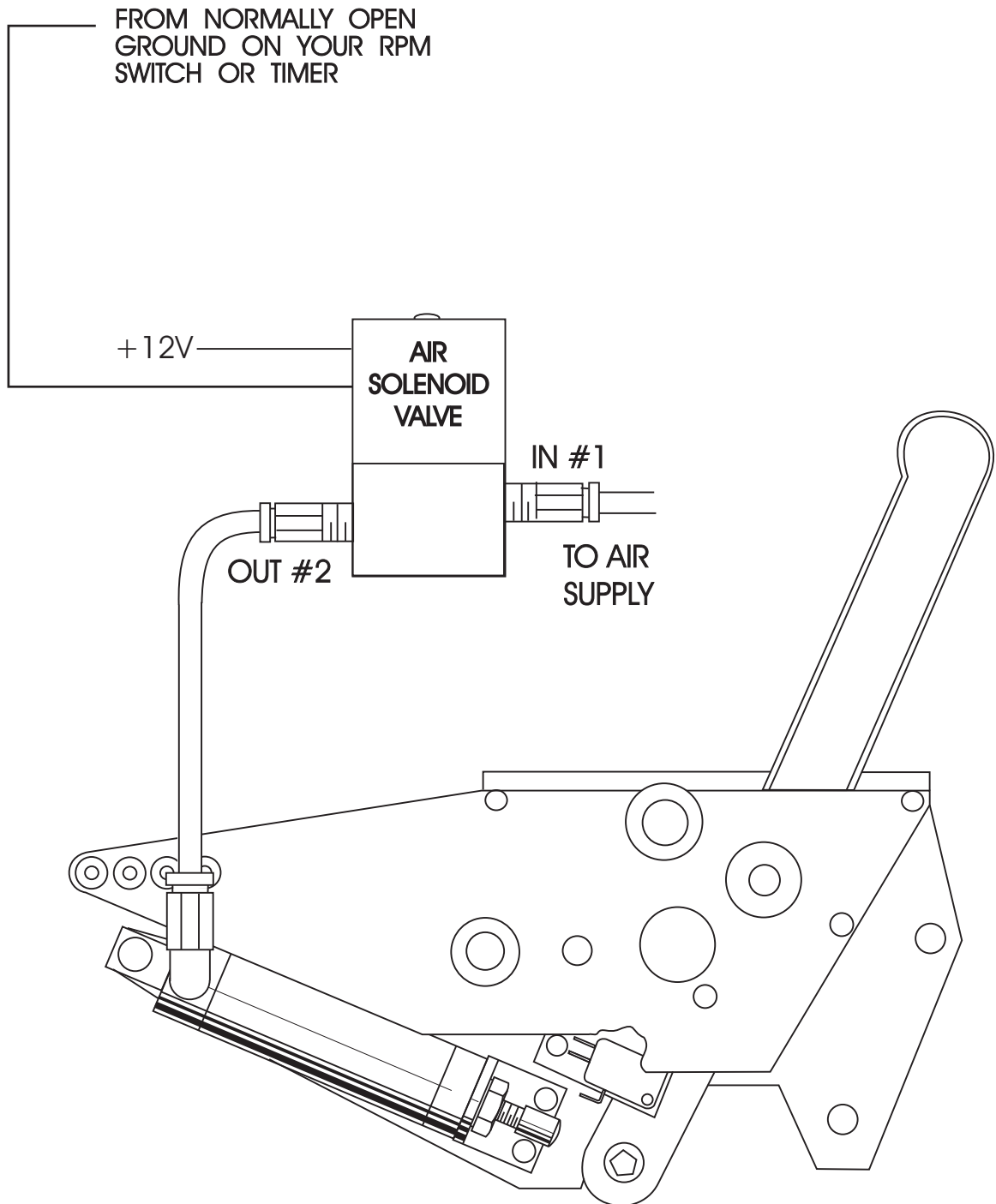


SHIFNOID WIRING DIAGRAM

FOR CMW CALLIS SHIFTER
with a SA5100 SHIFT KIT



INSTALLATION INSTRUCTIONS

“SHIFNOID”tm AUTO SHIFTER CO2 KIT

PART # SA5100

**FOR STANDARD “FORWARD” PATTERN 2 SPEED
TRANSMISSIONS ON A “CMW” SHIFTERtm**

Shift Activator manufactured by SHIFNOID LTD.
Shifter manufactured by CALLIS MACHINE WORKS

CABLE INFORMATION

If having a cable built by a “Morse style cable dealer” the following numbers will inform your builder of the exact information needed to build a cable that will fit this shifter.

STYLE 1 - SERIES 3 - TRAVEL 3 - CONDUIT 2 - BULKHEAD 3 - LENGTH IN INCHES ?

MOUNTING THE UNIT

If the SHIFNOID kit was purchased with a CMW shifter, it came pre assembled, ready to wire and bolt in. The shifter can be side mounted by using the two inline 5/16” holes or installed on the optional floor brackets using the front 5/16” hole and the lower rear 5/16” hole. To install your cable, you must have a compatible cable that uses a 3/8” end piece. This 3/8” end will clamp in the cable clamp on the back of the shifter. Remove the two button head screws from the top of the cable clamp and insert one end of the cable through the clamp. If your cable has a locking tab, you will need to remove it. Reinstall and tighten the two screws. Next, put the shifter in 1st gear exposing the cable mounting adapter on the handle. The shifter end of your cable must have a 10/32 threaded end. This end will thread into the existing rod end that is already hooked to the shifter handle. Use a locking, jam nut and or a thread locking fluid on the threads of your cable. When attaching your cable to your transmission verify that you have a transmission selector lever with a 2” center to center dimension. Measure this from the center of the selector lever to the hole for the cable swivel. If you do not have this style of mount it will have to be replaced with an after market style lever. Mount your cable from the rear (front on rear cable exit models) of the transmission. Make sure all cable mounts and routing allow the cable to operate in a smooth and non binding manner. Adjust your cable at either or both ends as needed to properly place your transmission in gear. Manually place your transmission in neutral, before attaching cable at the transmission end, then adjust your cable length so that your shifter is also in neutral. Attach cable to transmission and reverify both transmission and shifter are in neutral. Do this to ALL gears, one at a time, making sure your transmission is in the gear that matches your shifter indicator. Failure to do this can cause your transmission to be in a different gear than your shifter shows or not all the way in gear. The hold down nut on the reverse lock out is loose allowing you to position the lock out lever where it works best for the driver. Be sure to tighten this nut once you have the handle in the position you want. This shifter can be converted to a rear cable exit model by simply removing the side plate screws and the reverse lock out. Turn the plate over reinstalling the side plate screws and reverse lock out. The reverse lockout will attach to the threaded hole next to the hole you removed it from. This will place the lock out in the correct position to work. If you use this as a rear cable exit model, you will need to run your cable in from the front of the transmission or turn the shift arm up.. This typically will result in custom brackets needing to be built to hold your cable to your car. To plumb your shifter follow the enclosed diagram. Your incoming air / CO2 pressure should be set between 80 and 115 lbs. The lowest working pressure will save the most air / CO2. Increase pressure as needed to compensate for any hard shifting situations but do not exceed 115 lbs.

WIRING THE UNIT

Follow the wiring diagram supplied, and the instructions that came with your RPM switch so that the signal coming from the RPM switch at the the preset time closes to ground. (N.O. Ground). Some RPM switches close to power (+12 Volts) when activated. (N.O. + Volts). The SHIFNOID electric valve can be used either way. If your RPM switch supplies a N.O. (normally open) ground, attach this wire from your RPM switch to either wire coming from the electric valve and supply +12 volts to the other wire. If your RPM switch supplies a N.O. (normally open) +12 volts power, attach this wire to either wire coming from the electric valve and supply a good ground to the other.

If your car does not have a built in neutral safety switch you will need to use the one installed on the CMW shifter. Cut the wire that hooks your battery to your starter button or your starter relay to your starter button and connect one side to the COMMON or bottom post on the switch and the other wire to the NO (normally open) or middle post on the switch. This will disconnect the power to your starter when your shifter is in any gear other that Park or Neutral.

TESTING

You must test the neutral safety circuit to confirm you have wired it correctly before use. Disconnect the coil wire to your distributor so your car cannot start. Get in the car so that you have full control over the car to prevent it's movement. Put the car in one gear at a time starting with Park and verify that your starter can only turn over when the shifter is in Park or Neutral. Do this to all gears. If this does not work as intended STOP, DISCONNECT the shifter and call for assistance. Failure to have a properly installed neutral safety switch can result in your car starting or moving in gear, possibly causing injury or death.

After completing installation, turn all power on but do not start car. Place the shifter in first gear. If you have wired your shifter per the wiring diagram, your RPM switch will be supplying a ground when you rev your engine to it's preset RPMs. You can simulate this by using a jumper wire from a good ground to the electric valve. Momentarily touch the jumper to the same wire that your RPM switch attaches to. If you have used the alternate method and are using your RPM switch to supply +12 volts, then momentarily touch your jumper wire from +12 volts to the same wire on electric valve your RPM switch is hooked to. Your air valve should now trigger. Do this as many times as necessary to test but do not leave this on as you will overheat your air valve.

WARNING

Be Prepared! If you are using an RPM switch or Timer, you must be aware that at any time RFI (Radio Frequency Interference) could stop your RPM switch or Timer from activating. This in turn could cause your automatic shifter to not activate and you will need to shift manually. Always pay attention to your car and be prepared to manually shift or lift off of the accelerator to prevent the over revving of your engine. One of the best ways to protect your engine under these conditions is to also install some type of over rev control so that the engine cannot reach an RPM beyond it's safe limits. Please read the enclosed information on RFI included with this kit.

QUESTIONS?

If you have questions or concerns on the installation or use of this product, do NOT contact the retailer where you purchased the kit. Most retailers are not equipped to help you with in depth tech questions. SHIFNOID LTD. has arranged for all tech and warranty to be handled by it's distributor: CONTENDER PERFORMANCE PRODUCTS INC. Phone: 740-927-0060
www.contenderperformance.com